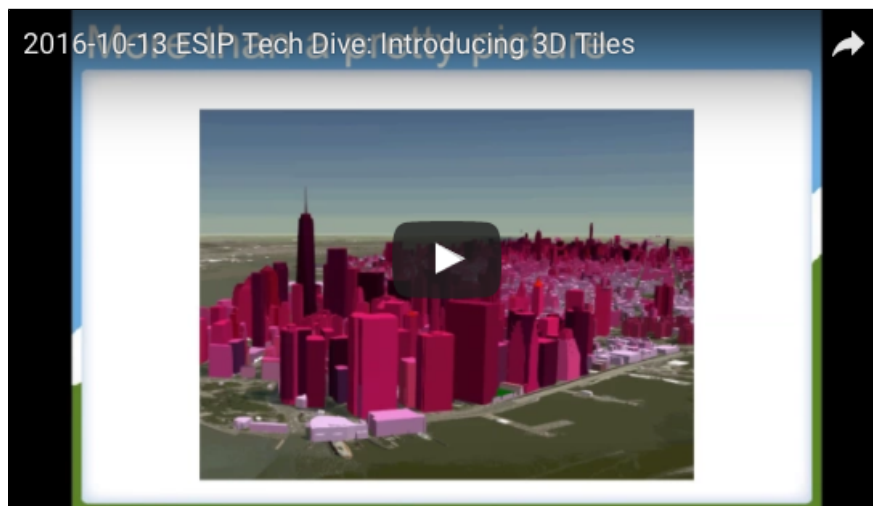




Recent CDI Working Group Activities

Hsu, Leslie 11 23, 2016 .

What are your CDI working group colleagues up to?



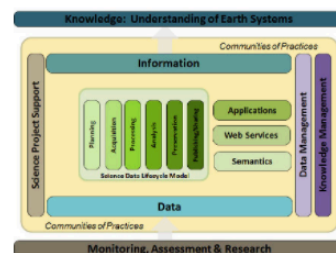
Welcome to the DMT Clearinghouse

The Data Management Training (DMT) Clearinghouse is a registry for online learning resources focusing on research data management.

It was created in a collaboration between the U.S. Geological Survey's Community for Data Integration, the Earth Sciences Information Partnership (ESIP), and DataONE.

For questions or feedback, please contact clearinghouseEd@esipfed.org

[Read More](#)



CDI SSF Components - <https://www2.usgs.gov/cdi/cdi-ssf/cdi-ssf-components.pdf>

Tech Stack Working Group

- Oct 13: "EarthCube Integration and Test Environment (ECITE)": Phil Yang, GMU (slides, recording)
- Nov 10: "Introducing 3D Tiles" Todd Smith, AGI (slides, recording)
- [Tech Stack meeting schedule](#) (joint with ESIP Tech Dives)
- Next meeting: Thurs 12/8, 3-4pm Eastern: **Vector Map Tiles**, Sam Matthews, Mapbox (more info)

Connected Devices WG

- Next meeting: Thurs 12/8, 1-2p Eastern: **Nonindigenous Aquatic Species Mobile Data Collection, Policy/IM Updates, Mobile App Dev Checklists** ([calendar link](#))

Semantic Web Working Group

- Nov 10: Discussed **SMWG activities for the CDI Workshop in 2017**
- Next meeting: December 8, 2-3p ET ([more info](#))

Data Management Working Group

- Nov 14: **ESIP Data Management Training Clearinghouse** (Tamar Norkin); **Data Management Planning Page Tiger Team Update** (Michelle Chang), Session Proposals for the CDI Workshop
- Next meeting: December 12, 2-3p Eastern: **mdEditor overview and feedback** (Josh Bradley) ([more info](#))

Communication Working Group

- Updated [resources for communicating about CDI](#) on the wiki
- Looking at Membership of CDI to identify gaps
- Next meeting: December 6, 3:30-4:30 ET

Metadata Reviewers Community of Practice

- Nov 7: discussed **data and metadata review checklists on the Data Management Website**, and what to do at the CDI 2017 in person workshop.
- [Notes from past meetings](#)
- Next meeting: December 5, 2-3p Eastern.

Science Center Strategy Development Focus Group

- Oct 18: Group planning: wrapping up the focus group as the FY16 goals were accomplished ([see the SCSDWG Products page for templates, tool comparisons, and data management plan best practices](#)).
- [Notes from past meetings](#)

Structure from Motion Community of Practice

- We are currently building the communication list, sharing resources on SfM, and deciding future activities.
- SfM Forum

[Working group home page](#) | [CDI Calendar](#)

Questions? Contact cdi@usgs.gov

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[More CDI Blog posts](#)

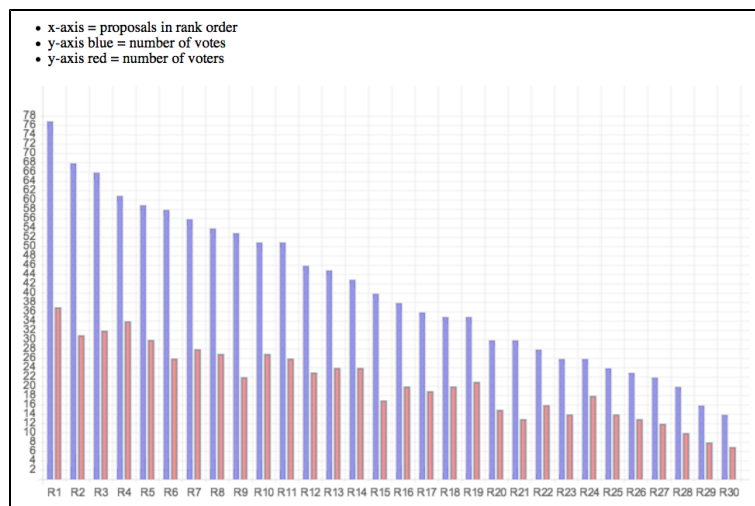


November 2016 Monthly Meeting: CDI Closing Voting Session, Council of Data Facilities, Trusted Digital Repositories, Scientific Programming

Hsu, Leslie 11 16, 2016 .

On November 9, 2016, the CDI Monthly Meeting included:

The CDI Closing Voting Session, where we viewed the **results of community voting on the FY17 Statements of Interest**.



A talk by Danie Kinkade (WHOI) on the **Council of Data Facilities**.

CDF - Why?

Biological & Chemical Oceanography Data Management Office

Consortium for Universities and Advanced Hydrographic Survey Institute

National Center for Atmospheric Research

International Research in Isotopes and Rare Elements

Neotoma: A National Science Foundation Program

NSF Arctic Data Center

UNAVCO

IEDA: Interdisciplinary Earth Data Alliance

CCHDO: Climate & Carbon Hydrographic Data Office

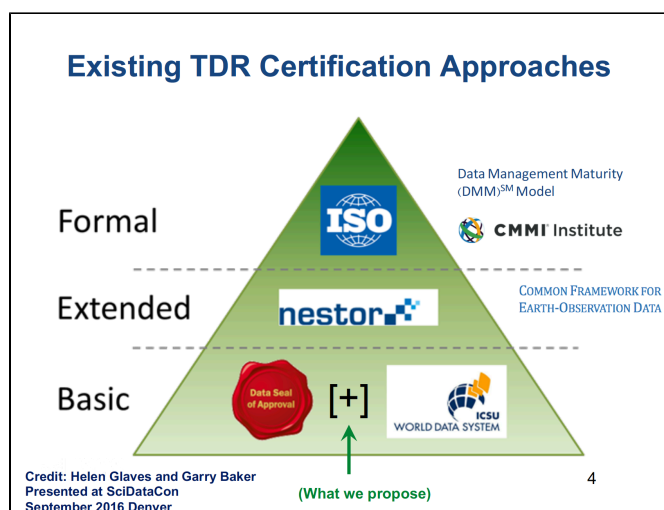
Ocean Observatories Initiative

International Ocean Discovery Program

unidata

- Significant NSF investments in GEO data and cyberinfrastructure facilities.
- serving diverse geoscience communities in significant ways.
- little coordination or partnership between facilities.
- much to offer to help shape and build EarthCube cyberinfrastructure.

A talk by Keith Kirk, John Faundeen, and Clara Brown (USGS) on **Trusted Digital Repositories in the USGS**.



A Scientist's Challenge presentation by Jeremiah Lant (USGS) on **Collaboration Tools and Workflows for Scientific Programming**.



Log in to the CDI Wiki to view the slides and recordings on the [Monthly Meeting Page](#)!

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[More CDI Blog posts](#)



A Brief and Incomplete History of the CDI RFP Process

Hsu, Leslie 11 07, 2016 .

or, Where the CDI Coordinator attempts to understand our path to today's CDI funded projects

We are in the middle of the FY17 CDI Request for Proposals Process, with Phase 1 of community voting on Statements of Interest ending in a couple of days during the [November Monthly Meeting](#). Although some CDI members have been involved since funding of projects started in FY10, this is my first full cycle as the CDI coordinator, and it's been interesting digging into the archives of the [CDI wiki](#) and learning more about how this process has evolved.

One thing that is constant is that the **CDI Coordinators are perpetually trying to streamline and improve the process and attract proposals of better quality through clearer guidelines**. Of course we would love increasing numbers of proposals each year (I was pretty down in the dumps when we barely missed recruiting the same number of proposals as last year), but there is a threshold beyond which it is not realistic to ask the community to read and consider all statements of interest, and there's less motivation to enter a competition where the success rate is <15%. (Unless your very survival depends on it and you have no choice, which we hope is not the situation here, or, you are just a very competitive person, which is fine.)

Here are some highlights in a brief and definitely incomplete history of the USGS Community for Data Integration (née Council for Data Integration).

FY10:

- **High value opportunities related to data integration** were discussed at the September 2009 Council for Data Integration face to face meeting.
- The opportunities were organized into goals and objectives for three major opportunities, and funded by the ELT at approximately \$500,000:
 - ArcGIS Access to Corporate Databases
 - Framework for Loosely Coupling Models
 - Data Upload, Registry, and Access Tool

FY11:

- Proposals were generated at the Annual Workshop by CDI members.
- All seven proposals were funded.
- Guiding principles started to emerge from community discussions, including:
 - **The best focus for the CDI leadership team is on facilitating relationships within the community and interconnection between existing projects.** Trying to fund major development activities is not the best use of any available CDI funding.

- The community needs to facilitate much more direct interaction between data practitioners and research scientists to make sure scientists know about available tools and methods and that technologists are focused on the highest priority problems
- Decided that it would be beneficial for CDI funded projects to produce both final report products and publicly released open source software

FY12:

- Proposals were developed by CDI Members at the face to face meeting in August 2011.
- Proposal development was continued in Working Groups and each project “belonged” to a working group.
- **The new CDI Science Support Framework** was used to guide CDI-funded projects, and to answer What is meant by Data Integration?
- 14 of 17 projects were approved by the CDI sponsors
- Project timeline of March (funds allocated) to September (deliverables due) established.

FY13:

- **First formal Bureau-wide Request for Proposals.**
- Proposals were divided into four categories related to the new CDI Science Support Framework.
 - a. Management, Policy, and Standards,
 - b. Computational Tools and Services,
 - c. Data and Information Assets,
 - d. Community Innovation.
- Proposals submitted as email attachment.
- 43 proposals were submitted and reviewed by 7 volunteer review panels. The proposal ranked #1 in each panel was funded, as well 3 proposals that were ranked #2 (total of 10 funded projects.)

FY14:

- **First 2-phase process with short Statements of Interest, then full proposals.**
- The four categories remained.
- **First use of UserVoice voting platform to capture the entire CDI community’s votes and comments.**
- For each Category, CDI held open SOI Review Meetings to discuss the SOIs and voting results.
- Phase 2 review panelists were anonymous.
- **A percentage of funds were reserved for emerging priorities.** The CDI Executive Sponsor could select high value projects in addition to the community and panel selections.
- First use of the online proposal management system.
- 64 Statements of Interest received (still had the “Be sure to read all SOIs before finalizing your votes.” statement), 9 projects funded.

FY15:

- Eliminated category approach, so that projects are all evaluated in a single group and those that are the best can be identified, whatever the category.
- There was a voting Opening Session, explaining voting procedures to the community.
- **Higher weighting for proposals that impact beyond a single MA or Program.**
- Included time in the SOI phase for internal review by CDI coordinators to identify opportunities for collaboration and linkages, before opening the vote to the Community.
- 39 Statements of Interest received, 11 projects funded.

FY16:

- **Phase 1 included optional supplemental Statements of Interest Media** (slides, video) to explain projects. This was discontinued in FY17 because of lack of evidence that this improved the voting process.
- 33 Statements of Interest received, 13 projects funded.

Here in FY17, we’ve reached a somewhat stable process. Small modifications continue to be made to the online RFP manager. We are also re-evaluating the timeline (very tight for most projects) and **brainstorming how to improve communication about the RFP process to the wider community and new members. Suggestions taken at cdi@usgs.gov v!**

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[More CDI Blog posts](#)



October Monthly Meeting: More funding opportunities, new metadata tools, model archive examples, and a CDI Working Group overview

Hsu, Leslie 10 25, 2016 .

Recording, slides, and Q&A from the October 12 Monthly Meeting are available at [CDI Monthly Meeting 20161012](#).



2017 Brief on USGS Innovation Center

<http://geography.wr.usgs.gov/ICES/index.html>

Jonathan Stock, Director, jstock@usgs.gov

**THE JOHN
WESLEY
POWELL CENTER
FOR ANALYSIS
AND
SYNTHESIS**



*Enhancing scientific discovery and problem-solving
through integrated research*



1

mdEditor: A Modern, Accessible Application for Creating Metadata

USGS CDI Monthly Meeting

October 12, 2016
Josh Bradley, Arctic LCC

Model Archive Update

With the October 1, 2016 implementation of the Public Access Plan, there are more examples of model archives, which was the topic of our [May Scientist's Challenge](#).

New:

- The Office of Groundwater new [Policy for Documenting, Archiving, and Public Release of Numerical Groundwater Flow and Transport Models](#) is out and effective October 1, 2016.
- You can also find the [groundwater models](#) that have been released to date in [data.gov](#).
- [Suspended Sediment Model Archive Examples: Policy and guidance for approval of surrogate regression models for computation of time series suspended-sediment concentrations and loads](#)

CDI Working Group Overview of goals and activity

See an overview of all of the CDI Working Groups, goals, and upcoming events: [\(Slides\)](#)

Working Group Wiki Page: bitly.com/usgscdiwg

Funding and Collaboration Opportunities through the Innovation Center and the Powell Center

We welcomed presentations by Jonathon Stock of the [USGS Innovation Center](#) and Jill Baron of the [John Wesley Powell Center for Analysis and Synthesis](#).

[This page](#) describes differences between CDI and these two programs.

CDI Keywords: data integration, scientific data life cycle, applications, data access, data handling and stewardship, scientific computing, knowledge delivery, "in the near-term, produce new and reusable ideas, methods or tools that have an impact beyond a single Program, Center, Region, or Mission Area" (from the RFP Guidance)

Innovation Center Keywords: measurement, monitoring, sampling, sensors, data acquisition, hardware, industry partnerships, "Successful proposals address issues of national importance where a technology partner can bring an emerging tool or technique (often with in-kind funding) that solves a problem aligned with USGS science strategy plans and private and public interests." ([from the About page](#))

Powell Center Keywords: synthesis, working groups, publications, "leveraging existing research efforts to produce powerful new insights and move scientific understanding and its inclusion into management" ([from the About page](#))

While the CDI proposal process is closed for FY17, both the Innovation Center and Powell Center have upcoming opportunities for funding collaborative, innovative ideas.

Upcoming Dates:

- December 9, 2016: Innovation Center workshop in Menlo Park - Theme: Ecosystems
- January 31, 2017: Powell Center Working Group Proposal submission deadline
- February 10, 2017: Innovation Fund proposal deadline

Contact John Stock (jstock@usgs.gov) or Jill Baron (jill_baron@usgs.gov) with any questions about their opportunities.

mdEditor: a modern, accessible tool for creating metadata

Joshua Bradley presented progress on the mdEditor tool, an open source client-side web application for authoring and editing metadata for spatial and non-spatial data. CDI has provided support for the development of this tool.

You can fork it on Github and automatically host your own instance using GitHub pages: More information at <https://github.com/adiwg/mdEditor> and <https://github.com/adiwg/mdEditor/wiki>

The [Data Management working group call](#) on December 12, 2016 at 2pm Eastern will have a more in-depth demo and Q&A period with Josh, join us for a deeper look!



What projects will be funded by CDI in FY17?

Hsu, Leslie 10 20, 2016 .

AKA Your role in guiding the course of CDI funded projects

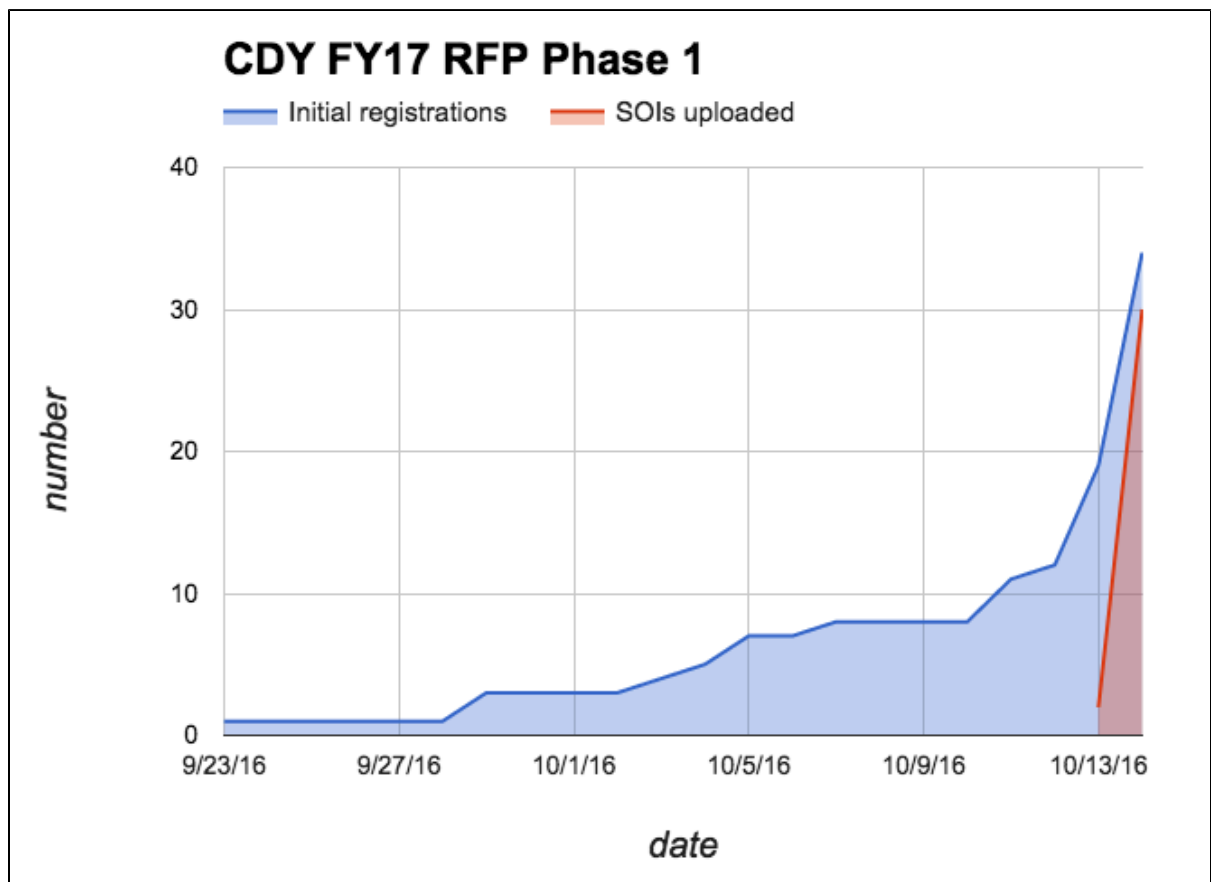
AKA Where the CDI coordinator makes a plea for you to vote

The FY17 Community for Data Integration Statements of Interest are in, and [voting is open](#).

Why you should comment and vote

- A project might be proposing a tool that you could use, and you want to support it.
- You might know of existing solutions that you want to make the PI aware of, so that they can take that into consideration.
- You will get an idea of what practitioners need, and might get an idea for your own future proposal.
- You will help steer the future direction of CDI.

Last Friday, we closed the submission portal for the Community for Data Integration Request for Proposals Phase 1. The portal was open from September 14 to October 14 and the initial registrations vs. completed submissions (PDF Statement of Interest (SOI) uploaded) looked like this:



This trend gave the CDI facilitators a panic attack about whether there would be a decent number of statements of interest submitted, but follows the typical pattern of Pls using “all of the available time” “efficiently.” Still, next year we will probably recommend that Pls start registering earlier, as there were some eleventh hour (or fifty-ninth minute) issues...

What you can do

1. **Vote:** [Community voting](#) is open from now until Wednesday, November 9, 2016, and you can see the [announcement](#) and instructions for getting set up to vote on the CDI forum.
2. **See the results:** Join us for the Closing Voting Session on November 9 during the [CDI Monthly Meeting](#). During that session, we will take a look at the statistics, determine the cut off for Phase 2, and reveal the list of projects that made it to the next round.

Some Q&A about our community voting process

- **Why do we ask you to read and seriously consider all Statements of Interest before voting?** For fair and consistent evaluation of all statements, we ask that you consider all statements, using the [CDI Guiding Principles](#), [Science Support Framework](#), and [Evaluation Criteria](#).
- **Why did we implement Community Voting?** Community voting is a pretty unique aspect of the CDI Request for Proposals. Implemented in the FY14 cycle, community voting was started as a way to involve and engage the membership so that we make sure to take into account our grassroots efforts, needs, and knowledge before moving forward with funding projects.
- **Why is voting open to anyone who is or becomes a member of CDI, including Pls?** We want the most open process of evaluation possible, denying no one, and we want funded projects that meet the needs of the most CDI members.
- **Isn't this just a popularity contest?** No. It is about communicating a need and a solution, and convincing voters that your solution is worthy. Although this may seem idealistic, I do think that the CDI community wants to fund the most exciting and potentially useful ideas, that the CDI membership is logical, and that networking/communicating/convincing/campaigning do not need to have negative connotations. The commenting and Phase 1 cut off selection are public and open to any members, and Pls are able to comment and advocate for their ideas on the voting platform.
- **How will the ability to comment on the voting platform help the process?** Commenting by the community is a way to clarify or improve statements of interest in a way that is publicly viewable by all. In addition, existing solutions may be brought to light for incorporation, collaboration, or as something that is already usable.

Each year, the CDI Request for Proposals evolves, whether it is modifying the Guiding Principles, implementing or discarding categories for proposals, changing the panel review process, or trying to streamline the cover sheet generation. Given this year's experience, we'll be considering several things for improving the user experience next year. We welcome your ideas at cdi@usgs.gov.

Now go [read some Statements of Interest and vote!](#)

Update

The following message was sent to FY17 CDI Lead-Pls and registrants on October 21, 2016:

Dear FY17 CDI Lead-Pls and registrants,

Since some of you may be new to CDI's Community Voting process, I thought I would send a bit of an explanation since we often get questions about what is allowed/condoned, etc.

CDI has had community voting since FY2014 in an effort to engage the entire membership so that we make sure to take into account our grassroots efforts, needs, and knowledge before moving forward with funding projects. In FY2013, the proposals were evaluated only by a panel. Prior to FY2013, proposals were developed at in-person CDI meetings and participants would use sticky notes and discussions to lend their feedback. Now CDI has a Bureau-wide RFP and many members who do not attend the annual in-person meetings, so the online community voting phase is a way to preserve that aspect of proposal development and evaluation.

We sometimes get comments that the community voting system can be “gamed” by especially active Pls who solicit votes. To this, we have several responses:

1. Community voting is just the first phase of the evaluations, there is a panel evaluation as well in Phase 2, that evaluates the Full proposals.

2. We look at other metrics in Phase 1 like ratio of number of voters:number of votes, IP address participation that is overly skewed, etc. to see if there are any anomalies.
3. The community voting indicates the community voice, but there is also the chance for CDI executive sponsors and CDI coordinators to point out SOIs that meet the criteria and add them to Phase 2, this has happened in past years.
4. We *do* encourage PIs to spread the word about their proposal to colleagues that would be interested in the project and support the effort, and lend their voice to CDI.
5. We do not support the solicitation of votes from “anyone off the street” who does not have any personal interest in the actual project or viewing the other submissions. Although, in our experience, this has not helped a project without merit to get funded, due to the other items listed above.

Since this topic has already come up this year, we decided that sending this explanation to all participating PIs was a place to start, and we will continue to do this in following years before the start of voting!

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[More CDI Blog posts](#)



Recent CDI Working Group Activities

Hsu, Leslie 10 11, 2016 .

Get to the parent page of all CDI Working Groups at bit.ly/usgscdiwg

The Tech Stack Working Group

- Sept 8: "**Apache Open Climate Workbench**": Lewis McGibbney and Kyo Lee, NASA JPL/Apache OCW
- [Meeting page, recording, and slides](#)
- [Tech Stack meeting schedule](#) (joint with ESIP Tech Dives)
- Next meeting: October 13, 3-4pm Eastern
- Contact: Rich Signell

The Semantic Web Working Group

- Sept 8: Check-in: individual members discussed **semantic web efforts in our day jobs**.
- On-going themes: desire for semantic versions of gazetteers that provide geospatial relationships between places. Value of controlled vocabulary keywords in scientific metadata that identify observation or measurements that are included in the data. How can we effectively publish linked data in the USGS this year?
- [Semantic Web WG meeting page](#)
- Next meeting: October 13, 2-3pm Eastern
- Contact: Fran Lightsom

The Data Management Working Group

- Sept 12: **New Process and Analyze pages on the Data Management Website** - Steve Tessler, NJ Water Science Center; Michelle Chang, Core Science Analytics, Synthesis, and Libraries
- [Meeting page and recording](#)
- Next meeting: Nov 14, 2-3pm Eastern
- Contact: Viv Hutchison

The Communication Working Group

- Sept 6: Continuing discussion of the **CDI Communication Plan**, edits for FY17, and prioritization of tasks
- Oct 4: Plan to analyze CDI membership for gaps and review of relevant September feedback from the interactive session for identifying Communication needs
- [Communication WG page](#)
- Next meeting: November 1, 3:30-4:30p Eastern
- Contacts: JC Nelson and Marcia McNiff

Metadata Reviewers Community of Practice

- Sept 10: Inaugural call
- Oct 3: Open calls to discuss topics on metadata review, [Keywords in Metadata](#), a presentation from the USGS Thesaurus Team
- [Metadata Reviewers Community of Practice Page](#)
- [Metadata Reviewers Forum](#)
- [Meeting Notes Page](#)
- Next meeting: November 7, 2-3p Eastern
- Contact: Fran Lightsom

Science Center Strategy Development Working Group

- Sept 21: Presentation on **WARC (Wetland and Aquatic Research Center) Data Management workflow and communication strategy** by Matt Cannister
- Oct 4: Continue revising [Data Management Plan FAQ](#) (restricted to internal Dept of Int)
- [Science Center Strategy Development Working Group](#) Wiki Page
- [Meeting Notes Page](#)
- Next meeting: October 19 - Monthly call - 1-2p Eastern
- Contact: Cassandra Ladino

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[More CDI Blog posts](#)

dmwg

tswg

semantic-web

metadata



View recent CDI-funded Products and Participate in the Annual CDI Request for Proposals Process

Hsu, Leslie 10 06, 2016 .

The [FY17 Annual Community for Data Integration Request for Proposals](#) (AKA FY17 CDI RFP) is underway, with 2-page Statements of Interest accepted until October 14, 2016.

Participate in the CDI RFP this year by submitting a Statement of Interest, commenting and voting during our community voting period, or volunteering to be a reviewer for the full proposal panel. Contact cdi@usgs.gov with any questions or suggestions.

**THE USGS COMMUNITY
FOR DATA INTEGRATION
WANTS TO FUND YOUR
INNOVATIVE SOLUTIONS
FOR DATA INTEGRATION
AND MANAGEMENT.**

The RFP funds impactful data integration and management ideas. **High marks are often given to proposals that implement or demonstrate innovative solutions that could be used or replicated by others.** Thus, many projects produce methods

papers to describe their implementation. Two examples of such publications that have come out of CDI funded work are:

From [sbtools: An R package for ScienceBase](#):

Winslow, LA, S Chamberlain, AP Appling, and JS Read. 2016. **sbtools: A package connecting R to cloud-based data for collaborative online research**. The R Journal 8: 387–398. <https://journal.r-project.org/archive/2016-1/winslow-chamberlain-appling-et-al.pdf>

From [National Dam Removal Database: A living database for information on dying dams](#):

Duda, J.J., Wieferich, D.J., Bristol, R.S., Bellmore, J.R., Hutchison, V.B., Vittum, K.M., Craig, Laura, and Warrick, J.A., 2016, **Dam Removal Information Portal (DRIP)—A map-based resource linking scientific studies and associated geospatial information about dam removals**: U.S. Geological Survey Open-File Report 2016-1132, 14 p., <http://dx.doi.org/10.3133/ofr20161132>.

If you were part of a past CDI-funded project and have a paper or product to link to your project page on [ScienceBase CDI Community](#), let us know!

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[More CDI Blog posts](#)



September Monthly Meeting: CDI Request for Proposals, Resources for Citizen Science Projects, and What you told us

Hsu, Leslie 10 04, 2016 .

The September Monthly Meeting excitingly coincided with [International Data Week](#), where several CDI members were able to participate and meet each other in Denver. Still, we forged on with our regular monthly virtual meeting - the last of fiscal year 2016.

Slides and recording are available at the [September Monthly Meeting wiki page](#).

CDI FY17 Request for Proposals

First, Kevin Gallagher, one of the executive sponsors of the Community for Data Integration, announced the FY17 CDI Request for Proposals. **2-page statements of interest are due by October 14!**

[See here for more information about the CDI FY17 RFP](#), including the official guidance document, link to registering to submit your statement of interest, and recording of the information session.

CDI RFP Guiding Principles

- Focus on targeted efforts that yield near-term benefits to Earth and biological science
- Leverage existing capabilities and data
- Implement and demonstrate innovative solutions (e.g. methodologies, tools, or integration concepts) that could be used or replicated by others at scales from project to enterprise
- Preserve, expose, and improve access to Earth and biological science data, models, and other outputs
- Develop, organize, and share knowledge and best practices in data integration
- Projects should have impact beyond a single Science Center, Program, Region, or Mission Area



Community for Data
Integration (CDI)

2



Key Dates

September 14	RFP Announcement
September 29 @ 4 pm ET	RFP Information Session
October 14 @ 5 pm ET	Statements of Interest (SOI) Due
November 9 @ 11 am ET	SOI Voting – Closing Session
November 28	Invite Full Proposal Submissions
Jan. 20, 2017 @ 5 pm ET	Full Proposals Due
Jan. – Feb. 2017	Full Proposal Review Panel
March 8, 2017	Awarded Projects Announced



Community for Data
Integration (CDI)

4



Citizenscience.gov Resources & Paperwork Reduction Act and Development of a Generic Clearance

Alison Parker of the EPA and James Sayer of USGS presented on recent work and resources for citizen science and crowdsourcing projects. Importantly, there are efforts underway to make it easier to complete the paperwork to get a citizen science project up and running.

James is leading this effort for a “Generic Clearance” that will help USGS citizen science projects. In order to help him collect information, please do **contact him if you are planning a citizen science app in the future!** He would like to know estimates of number of participants and observations. jsayer@usgs.gov

Near future

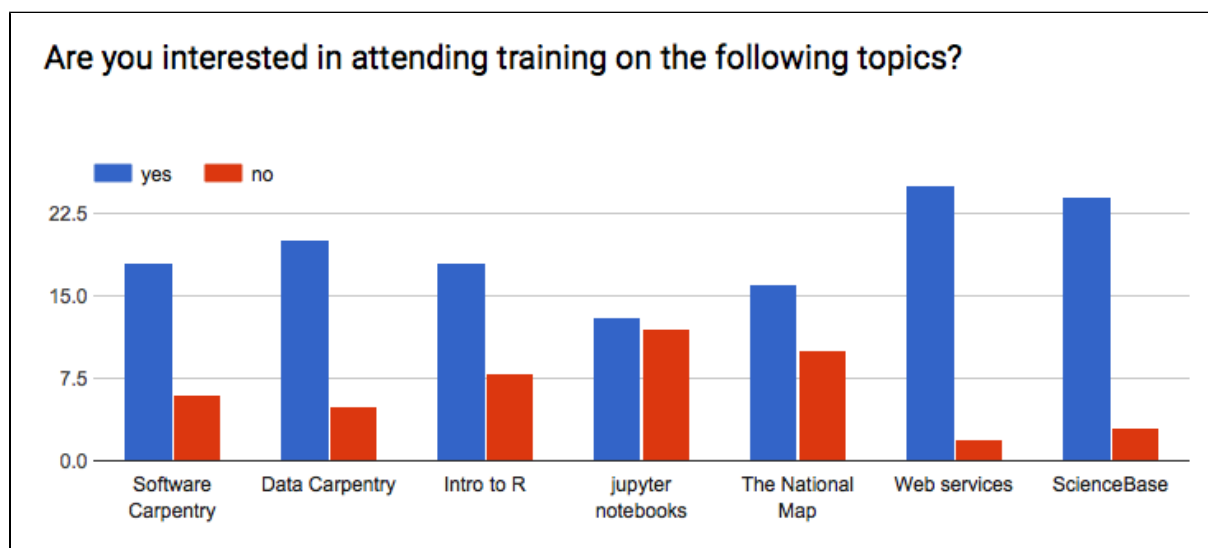
- We will be working with DOI to create a Generic collection. This may be completed by January.
- OMB review and approval may take until April 2017.
- We need future science project to include in our collection response estimates.
 - How many participants?
 - How many observations?
 - These are estimates
 - jsayer@usgs.gov

CDI in FY17 - Interactive polling and feedback for the Annual Meeting and More

Finally, in preparation for FY17, we held a polling and feedback session to guide topics and activities for the upcoming year, especially for planning our [in-person Annual Workshop](#).

These polls are still open if you'd like to contribute:

1. Warm up, What is CDI to you?
2. Working Group activities
3. Trainings
4. Hands-On Sessions
5. Bonus Round



Some highlights are:

- we can do more to let the wider community know about our CDI working group activities

- we want to have more information about tools and data assets that are available to us through our agency
- we want to learn about web-based mapping and visualization tools

I may be biased, but I think it was a great way to wrap up FY16, and I'm looking forward to all of the events and activities in the year ahead.

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[More CDI Blog posts](#)



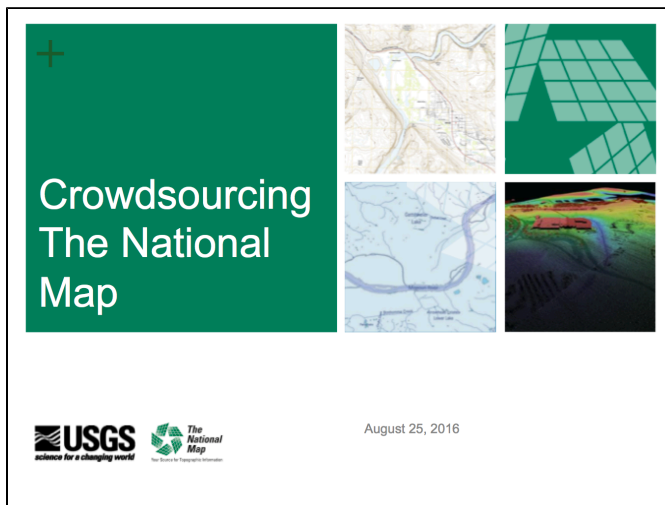
Connected Devices WG, 8/25: Crowdsourcing the National Map, Using myUSGS for Software Code Review, USGS and DOI Policy Updates

Hsu, Leslie 9 03, 2016 .

The Connected Devices working group held a [meeting on August 25, 2016](#), with three topics.

- Crowdsourcing of the National Map is coming to mobile devices.
- Demonstration and discussion on use of myUSGS (Atlassian) tools to help software development, including items required by USGS Draft Software Release IM.
- USGS and DOI Policy Updates

View the recordings and slides at the [Meeting wiki page](#)!



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[More CDI Blog posts](#)

[connected_devices](#)

[tswg](#)

[mobile_applications_development](#)

[crowdsourcing](#)

[myusgs](#)

[policy](#)

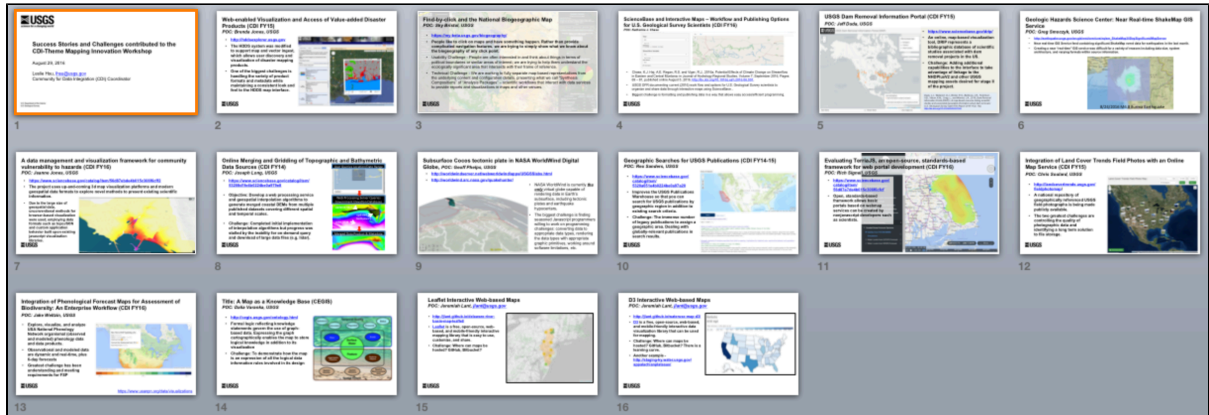


CDI-Theme Mapping Innovation Workshop, 8/29

Hsu, Leslie 9 03, 2016 .

On August 29, CDI joined in the [USGS Mapping Innovation Workshop](#) (USGS internal link) frenzy. (Two weeks of regional and virtual workshops to engage USGS staff in discussing mapping innovation.)

CDI first highlighted mapping successes and challenges from its members with slides contributed from participants, with 15 mapping-related projects, many CDI-funded.



CDI-Theme Mapping Success Stories and Challenges: [Download the pdf](#)

The real fun came during the discussion session. Virtual meetings using WebEx and phone can be a challenge, but using Google forms, we were able to get great and varied input on the discussion themes of Data Interoperability, Data Discovery and Sharing, and Communication and Visualization.

Highlights from our report:

- Common challenges in achieving fullest data interoperability included both financial and outreach/educational challenges. **There is still a need to impress upon users of the importance of open and standards-based formats**.
- There was widespread interest from the participants in learning more about the **Semantic web** to make data discoverable.
- There was widespread interest from the participants in learning more about applications for mapping such as **Leaflet and D3**
- There was repeated mention of the use of narratives such as **StoryMaps** to effectively communicate data and results.

Read more at the [CDI-Theme Innovation Mapping Workshop Report \(pdf\)](#).

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CDI 2016 Virtual Trainings Recap

Hsu, Leslie 9 03, 2016 .

CDI held a Virtual Training Series this summer in place of an in-person Annual Workshop.

What we did:

- Based on feedback from the CDI IdeaLab, workshop surveys, and CDI coordinator calls, we posed a [list of virtual training topics](#) for the CDI community to vote on.
- We selected the top three topics based on voting:
 - Reviewing Metadata and Using Controlled Vocabularies
 - Version Control: Git, GitHub, and Stash (now called Bitbucket) & USGS Software Policy Update
 - Scientific Workflow and Reproducibility
- We identified and recruited volunteer instructors (CDI coordinator comment: non-trivial)
- We held the trainings in July and August 2016
- We [posted the recordings, presentation materials, and Q&A on the wiki](#)

What we learned about the topics:

(a few highlights, definitely not comprehensive)

- Check out the [USGS Software Release Policy Live FAQ](#) to browse previous questions or add your own
- [Elements of a good metadata review](#)
- For reproducible research, Plan for reproducibility before you start.
- A new [Metadata Reviewers Community of Practice](#) in the USGS is getting started.

What we learned about hosting virtual trainings:

- Given the wide spectrum of attendees and their motivation for attending a training, there should be a clear distinction between USGS-focused trainings and external tools. This should be clarified in the announcements for the events.
- There is very high demand for relevant trainings on topics like these, especially in the evolving world of USGS data management and access.

A huge thanks to all of the volunteer instructors that stepped up to meet this need.

We'll be repeating this exercise in FY18 if not earlier, and look forward to hearing what topics CDI wants to learn about in the next training series!

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August Monthly Meeting: Releasing, Discovering, and Accessing Data; Annual Meeting Planning; RFP is imminent

Hsu, Leslie 8 23, 2016 .

The CDI August Monthly Meeting featured several presentations related to Data Access, as well as Announcements in preparation of FY17 events.

Access the slides and recording at the August Monthly Meeting Page: [CDI Monthly Meeting 20160810](#)

Scientist's Challenge: Data Release for a Diverse Group of Geochemistry Labs

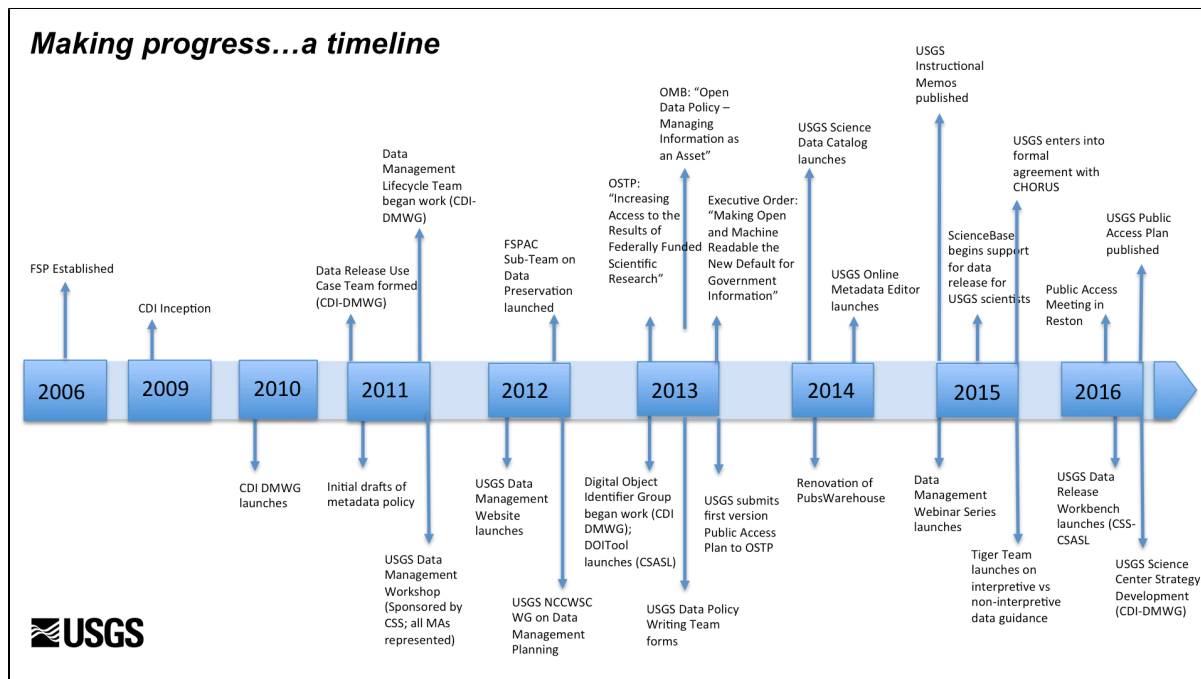
Leah Morgan from the Argon Geochemistry Laboratory told us about the types of data collected at the Southwest Isotope Research Laboratory, data formats, software, community guidelines, and asked **what was the best way to get started with Data Release.**

Comments on the [forum post](#) include the [Data Release Instructions page](#) and [examples of Data Dictionaries](#).

Public Access/Open Access at USGS: A story of a Science Data and Publishing Evolution

Viv Hutchison, Science Data Management Branch Chief, presented the **history and progress of the USGS Public Access/Open Data Plan**.

This timeline from her talk nicely summarizes where we've come from in dealing making scientific data public and open. (Click image to expand.)



If you want to read more about the Public Access plan and implementation updates, see https://www2.usgs.gov/quality_integrity/open_access/

The Data-Driven Discovery Initiative at Moore

Carly Moore's talk about Data-Driven Discovery showed how some academic institutions are making changes to support data-driven research and tools.

An interesting concept discussed is the rise of the distribution of preprints. A Preprint is an early version of a manuscript. It may be a draft, an incomplete version, or a final version of an article.

Preprints have been popular in certain disciplines for a long time. They are a great example of openly sharing research results in a very fast and efficient manner. [Arxiv.org](https://arxiv.org) and [ASAPBio.org](https://asapbio.org) are examples of preprint servers. Subsequent discussion brought up the point that many Federal policies would not allow such sharing before interpretive results are approved, an interesting point to consider as the scientific data and research landscape continues to evolve.

CDI Annual Workshop Planning

The CDI coordinators are working to get a draft agenda and an entry in the USGS Conference Database in the next month!

Help us by contributing and voting on ideas! <https://usgs1.uservoice.com/forums/398538-annual-meeting-fy17-ideas>

We will work with this data during the September Monthly Meeting.

CDI FY17 Request For Proposals and Collaboration Forum

The FY17 Community for Data Integration RFP will be announced at the September Monthly Meeting, it is right around the corner.

Prepare for the CDI FY17 RFP - View past funded projects: <https://www2.usgs.gov/cdi/products-publications.html>

Or use the collaboration forum to look for collaborators: [FY17 RFP Collaboration Forum](#)

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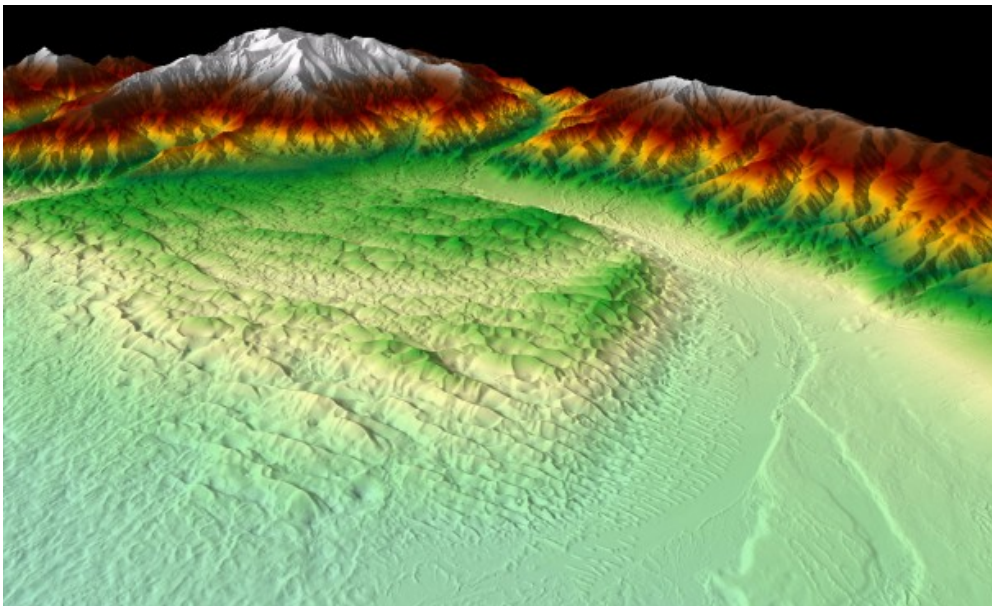
Highlights from the USGS Lidar Science Innovation Workshop 2016

Hsu, Leslie 8 12, 2016 .

The USGS held a [Lidar Science Innovation Workshop](#) (internal link) from 8/2 to 8/4 in Fort Collins, CO.

What is Lidar

Light Detection And Ranging, a way to measure distance with a laser light, used to make high-resolution elevation maps. (At varying resolution but commonly at approximately 1 meter resolution (an elevation point every square meter) with +/-10 centimeter vertical resolution => much higher resolution than people were used to previously.)

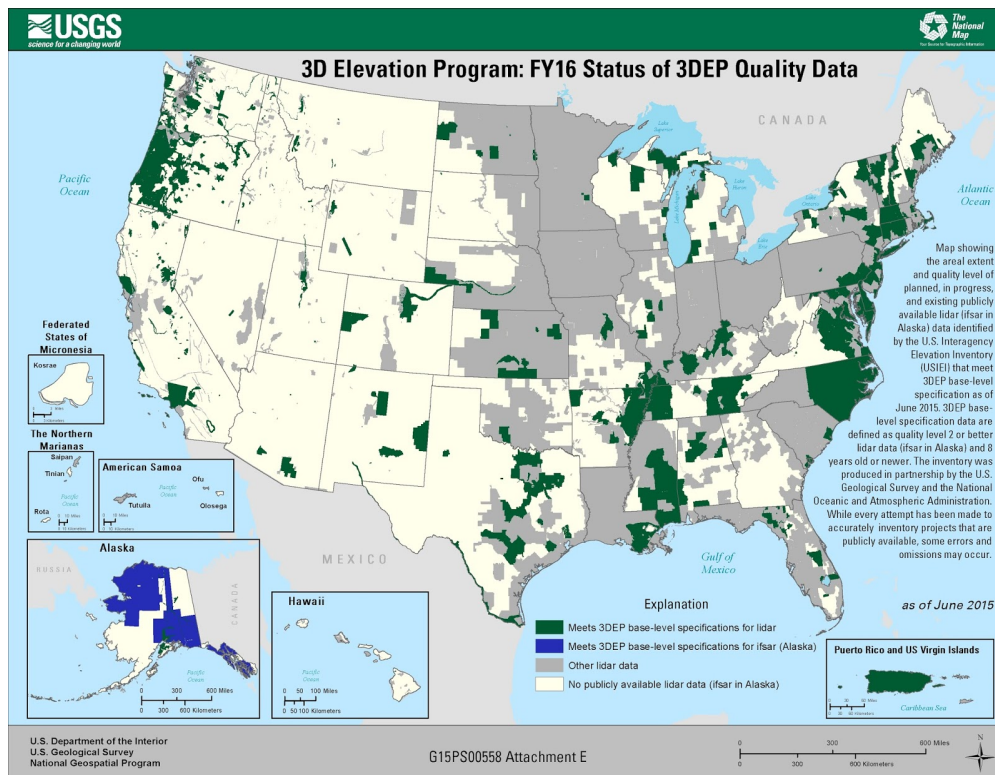


A bare-earth DEM describes details of the Great Sand Dunes National Park and Preserve in Colorado. (Credit: USGS) (Source : Stoker, 2016)

Highlights

- The workshop was a great opportunity for newcomers to get up to date with USGS elevation projects, use of Lidar, and new Lidar technologies. Meanwhile, Lidar experts could network, present their research, and find out how their

- colleagues in USGS are using Lidar.
- The 3D Elevation Program has an ambitious task ahead of it to map the nation in high-resolution Lidar over the next 8 years.
- Some participants wanted more training opportunities for working with Lidar data, while others “hoped to retire without ever downloading a point cloud” (meaning that they prefer the derived products).
- There was the desire for the formation of a Lidar Community of Practice.
- A nice app Poll Everywhere (pollev.com) was used very effectively to display audience opinion and ideas during the Innovation Panel and the Closing Plenary.
- Miscellaneous things learned:
 - Ele-hydro: hydrography from elevation
 - Single-Photon and Geiger-Mode vs Linear-Mode Lidar
 - 3DEP data dictionary (don't use spatial metadata without it)
 - DEM Geomorphology Tools



A map shows the FY16 status of available 3DEP data. (Credit: USGS) ([Source: Stoker, 2016](#))

What were the next steps

(from the Closing Plenary, [View Download](#), internal links)

- Know your [USGS National Map liaison](#), talk to them
- Use the [Seasketch](#) site to submit your “requirements” for Lidar collection
- Spread the word about Lidar and [3DEP](#)
- Build applications using Lidar
- Attend the [August 16 Mapping Innovation Kickoff](#) and [series](#) (internal links)

Another nice summary of the 3DEP program: [The 3D Elevation Program \(3DEP\): Learn the Details and Goals of this Ambitious USGS Project](#), *Earth Imaging Journal*, Stoker, Feb 2, 2016.

More in-depth

- You can check out the data.gov entry for the [Lidar Point Cloud from the USGS National Map](#), in case you didn't believe this is big data (809,445 datasets in the collection...).
- The [National Enhanced Elevation Assessment \(NEEA\)](#) - approximately 800 pages including appendices, documenting business uses for elevation needs across 34 Federal agencies, agencies from all 50 States, selected local government

and Tribal offices, and private and not-for profit organizations.

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CDI at the ESIP Summer Meeting

Hsu, Leslie 8 12, 2016 .



The USGS CDI had nice representation at the [ESIP \(Federation for Earth Science Information Partners\) Summer Meeting](#) in Durham, NC, from July 19-22, 2016. ESIP is known to some (me) as “the place where those cool Earth Science geeks hang out.”

Highlights:

- Leslie Hsu and Viv Hutchison were part of the coordinating team for the [Connecting Communities working session](#). **Thirty-three participants identified challenges and solutions to connecting our many overlapping communities of practice and becoming more efficient in our working groups.** The session outcomes are summarized in [this document](#).
- Madison Langseth convened an extremely well-attended session on the [Use of Persistent Identifiers to link data, publications, people, and institutions](#). Notes and presentations are linked on the [ESIP Commons site](#).
- The FY16 CDI-funded project [Data Management Training Clearinghouse](#) presented its progress at the session: [Data Management Training \(DMT\) Working Group Update](#). (Notes and presentation also available at the [ESIP Commons site](#).)

ESIP used some new technologies very effectively to improve the meeting participants' experience, including:

- [Sched.org](#): event organization app
- [imhere.esipfed.org](#): conference participant sign-in app

Here's ESIP's own [Summer Meeting Summary](#), complete with a [storify](#) from the [#esipfed](#) tweets.

I'm looking forward to the next meeting to get the latest scoop on the Earth Science information landscape and to inspire ideas and connections for CDI.

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Tech Stack WG, 7/13: The NOAA OneStop Data Discovery and Access Framework Project, Ken Casey, NOAA/NCEI

Hsu, Leslie 8 07, 2016 .

From the [ESIP Interoperability and Technology/Tech Dive Webinar Series](#) page:

Summary: The OneStop Project is designed to improve NOAA's data discovery and access framework. Focusing on all layers of the framework and not just the user interface, OneStop is addressing data format and metadata best practices, ensuring more data are available through modern web services, working to improve the relevance of dataset searches, and improving both collection-level metadata management and granule level metadata systems to accommodate the wide variety and vast scale of NOAA's data.

Speaker: Ken Casey is the Deputy Director of the Data Stewardship Division in the NOAA National Centers for Environmental Information (NCEI). He leads the OneStop project, is active within NOAA's Big Earth Data Initiative and Big Data Project. Ken serves on a variety of national and international science and data management panels including the US Group on Earth Observations Data Management Working Group and the Group for High Resolution Sea Surface Temperature (GHRSSST) Science Team. He co-chairs the Committee on Earth Observing Satellites SST Virtual Constellation and represents NCEI in the Federation of Earth Science Information Partners (ESIP). He holds a PhD in Physical Oceanography from the University of Rhode Island.

GoToMeeting Recording: <https://youtu.be/wp7trIRFDOs>

Slides: <https://speakerdeck.com/esipfed/noaa-one-stop-ken-casey-ncei>

The next Tech Stack webinar is scheduled for August 11, 2016: "UV-CDAT": Charles Doutriaux, LLNL. Details will be posted at http://wiki.esipfed.org/index.php/Interoperability_and_Technology/Tech_Dive_Webinar_Series#Tech_Dive_Webinars

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